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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,883	01/28/2002	Yong-Kyu Jang	6192.0222.AA	2057

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EXAMINER

CHUNG, DAVID Y


ART UNIT

PAPER NUMBER

2871

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	10/055,883	JANG, YONG-KYU	
	Examiner	Art Unit	
	David Y. Chung	2871	

-- The MAILING DATE of this communication appears *n* th cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-14 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 6-9 and 18-29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3 and 15-17 rejected under 35 U.S.C. 102(b) as being anticipated by Kim (U.S. 6,038,003).

As to claims 1 and 15, Kim discloses a method of manufacturing a liquid crystal display in figures 5a-5g. Figure 5g shows a first and second region. The first region comprises the display area and a peripheral area that surrounds the display area. The second region comprises the data pads and gate pads. The gate and data pads are for applying an external signal to the pixels. Note that in figure 5f, the passivation layer 137 has a thickness near opening 169 that is smaller than the thickness in the peripheral area.

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As to claims 2 and 16, figure 4 shows a pixel region and a peripheral region that is arranged around the pixel region and surrounds the gate and data pads.

As to claims 3 and 17, figure 4 shows thin film transistors connected to the pixels as switching devices and gate and data pads connected to the gate and data lines respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S. 6,038,003).

Kim does not disclose the thickness of the passivation layer. However, the thickness of the passivation layer was an obvious parameter to optimize. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to make the thickness in the peripheral area between 0.3 and 3.0 μm and the difference in thickness to be between 2.1 and 2.4 μm since it has been held that determining the optimum value of a result effective variable involves only routine skill in the art.

Allowable Subject Matter

Claims 6, 7, 18 and 19 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 10-14 allowed.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art taught or suggested a reflective liquid crystal display device having an insulation layer with a first thickness around the opening exposing the gate and data pads and a second thickness in the peripheral region surrounding the pixel region.


Claims 8, 9, 20-29 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art taught or suggested a device having an insulation layer with a first thickness around the opening exposing the gate and data pads and a second thickness in the peripheral region surrounding the pixel region wherein the insulation layer comprises a first organic layer formed in the pixel region only and a second organic layer formed over the whole display substrate.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.


ROBERT H. KIM
SUPERVISOR, PATENT EXAMINER
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David Chung
GAU 2871
08/24/03